

Testimony of Glenn S. Podonsky
Director, Office of Security and Safety Performance Assurance
U.S. Department of Energy
Before the
Subcommittee on National Security, Emerging Threats, and International Relations
Committee on Government Reform
U.S. House of Representatives

July 26, 2005

Mr. Chairman and members of the subcommittee, thank you for inviting me to testify today as you assess the readiness of protective forces at DOE sites that are managed by the Office of Energy, Science, and Environment (ESE) in response to the GAO draft report “*Nuclear Security: DOE’s Office of Energy, Science and Environment Needs To Take Prompt, Coordinated Action to Meet the Design Basis Threat.*” I will address various aspects and implications of the GAO draft report from the perspective of the Office of Independent Oversight within the Office of Security and Safety Performance Assurance.

There is no more important responsibility for the Department of Energy than the safety and security of its employees and the communities around our facilities together with the protection of the vital national security assets in its custody. Secretary Bodman and Deputy Secretary Sell have acknowledged this, and have demonstrated keen interest in and strong support for our safety and security programs, and have continued the security initiatives begun by their predecessors. A vital element in the success of our protection strategy is holding line managers accountable for security program implementation and for meeting the established deadlines for implementing the requirements of the current Design Basis Threat policy. Due to the nature of its mission and the magnitude of its national security assets, the National Nuclear Security Administration (NNSA) is usually in the spotlight when it comes to security matters. However,

ESE sites – and in particular the sites addressed in the GAO draft report – currently possess and will continue to possess significant quantities of Special Nuclear Material that require protection equal to that afforded NNSA sites. The Department and its senior managers are responsible for providing effective protection for all national security assets in our possession, and to base that protection on the requirements of our Design Basis Threat policy and all associated needs, risks, and consequences – regardless of which Departmental organization has custody of the particular asset.

The subcommittee has expressed interest in three specific issues reflected in the GAO draft report: the status and adequacy of protective force training and equipment; the adequacy of resources provided to implement the requirements of the Design Basis Threat policy; and the coordination of security efforts across ESE sites. I will address those portions of the GAO draft report and the ESE security posture that fall within the scope of responsibilities of the Office of Security and Safety Performance Assurance. First, however, the GAO draft report addresses the protection capability of ESE sites in the context of the October 2004 Design Basis Threat policy. Let me bring you up to date on the status of the Design Basis Threat.

The current (October 2004) Design Basis Threat policy identifies an adversary capability that is significantly greater than that identified by previous the Design Basis Threat policy. In particular, the size of an adversary force that must be successfully countered was significantly increased. The magnitude of this increase caused some to question whether the new numbers were fully justified by the underlying intelligence estimates. In part to address these doubts, and to assure that the Department moves aggressively to plan and implement protection system

strategies in response to the requirements of the Design Basis Threat, Deputy Secretary Sell directed that the annual full review of the Design Basis Threat policy be conducted early, and be completed by July 1, 2005. At the same time, he directed that the October 2004 Design Basis Threat policy remain in effect, and that all requirements and associated milestones toward implementation would be enforced while the policy was being reviewed. The intelligence analysis completed as part of that review is now being validated by other appropriate executive agencies, to include the National Counterterrorism Center and we anticipate having interagency comments at the end of July. However, the Review has had no impact on NNSA and ESE efforts to develop and submit their Design Basis Threat implementation plans that are due July 29 which SSA is in the process of reviewing.

Before I address the contents of the GAO draft report, let me give you some impressions of ESE security efforts from the perspective of the Office of Security and Safety Performance Assurance. The missions of ESE facilities are generally not national security-related, and many, if not most, of their programs do not involve classified information or significant quantities of Special Nuclear Material. Their missions involve basic and applied scientific research as well as environmental remediation of former weapons complex facilities. Some of the environmental remediation facilities are not expected to be enduring, and security interests at those facilities will be gone or greatly reduced when the remediation work is complete. Understandably, ESE is especially cautious about investing the significant resources required to upgrade protection programs in response to the current Design Basis Threat at facilities that have limited or non-enduring security interests. However, in the Department's view, existing national security assets must be effectively protected as long as they are on hand. Further, ESE has a number of sites –

such as the Savannah River Site, Oak Ridge National Laboratory, Idaho National Laboratory, and the Hanford Site – that are expected to retain significant quantities of Special Nuclear Material for extended periods and which are in need of upgraded protection systems. We have seen some improvements in the ESE planning and implementation of security upgrades at its facilities and we have witnessed a new enthusiasm among some ESE managers. For example, our recent collaborative Site Assistance Visit effort, which I will discuss later in this testimony, included all but one of the ESE sites addressed in the GAO draft report – one of them (ORNL) at the express request of ESE. ESE has requested a similar visit to the remaining site (Hanford), and that visit is tentatively scheduled for September. ESE and its sites are in the process of developing implementation plans to meet the Design Basis Threat policy, and we will shortly see their formal proposals for security upgrades. ESE has been cautious with some of the Department's current security initiatives, and the need to move aggressively to implement upgrades when compared to NNSA, which admittedly has a much greater variety and concentration of vital national security assets than ESE. The uncertainty (due to schedule or project viability) of some of the ESE projects, such as the down blending of U-233 at ORNL and the removal of nuclear materials from Hanford, is influencing, at least in part, decision-making and progress. However, the Idaho site has moved out aggressively with a very impressive Design Basis Threat implementation plan and they have also enthusiastically embraced the application of new technologies in their security planning.

Comments on GAO Draft Report Conclusions

Now I'd like to address some of the specifics of the GAO draft report. First, GAO generally concluded that the protective forces at the ESE facilities visited are adequately trained and equipped to protect their facilities, but that they demonstrate some weaknesses that must be addressed. We agree with this assessment. There are no surprises here. This conclusion is consistent with our own previous safeguards and security evaluations of these facilities conducted by the Office of Independent Oversight and Performance Assurance. In fact, even the nature of the specific shortcomings called out by GAO, such as problems with radio communications coverage, are consistent with our past observations around the complex, including at ESE sites. GAO also acknowledged that the sites were aware of the identified shortcomings and were working to fix some of them. We also agree that the sites need to address the identified training and equipment deficiencies as soon as practical, and not wait until 2008, the date for full compliance with the current Design Basis Threat policy. Other issues identified as shortcomings by the GAO, such as individual participation in force-on-force exercises and the records tracking such participation, are more global in nature and will need to be addressed in Department-wide policy requirements. For this reason I have directed the Office of Security to revise the Department's protective force policies. The revisions are due to be promulgated by the end of this calendar year. We recognize that the GAO's conclusions regarding the current ability of ESE protective forces are based on current training and equipment requirements. As the Department and the sites implement plans to mitigate the Design Basis Threat, some protective force training and equipment requirements will evolve, and in many cases they are expected to result in increased requirements. However, our planning and

implementation process is intended to ensure that effective protection levels are maintained at all times.

We also agree with the GAO's conclusions supporting broader and more general actions required of DOE and ESE in order to meet the October 2008 goal for full implementation of the Design Basis Threat requirements. The GAO acknowledges the value of three major DOE security initiatives, and adds a fourth recommendation of its own. The GAO draft report essentially endorses three key elements of DOE's effort to upgrade its protection posture for significant quantities of Special Nuclear Material. These include creation of an elite protective force, introduction of new and additional security technologies to assist the protective forces, and consolidation of nuclear materials to reduce the number of targets and locations that require the highest level of protection. To their endorsement of these initiatives, GAO adds a recommendation that ESE establish a security organization to manage these security efforts within ESE. We are encouraged by GAO's support of our own ongoing security initiatives. We also endorse GAO's recommendation to establish an ESE security organization. As it is up to the Under Secretary to determine the best way to manage ESE, we believe that an appropriate security organization at the highest level within ESE and with appropriate authorities delegated could facilitate effective and efficient management of security resources and implementation of required upgrades. Security upgrades will involve a substantial effort over the next two years, and if ESE is to achieve protection upgrade goals by October 2008, this sizeable effort must be well coordinated and well managed and fully endorsed by the Under Secretary for ESE.

While we largely agree with the conclusions and recommendations contained in the GAO draft report, we strongly disagree with GAO's expressed pessimism regarding our ability to implement our security initiatives on schedule. We take particular exception to this view regarding two initiatives identified in the draft report for which the Office of Security and Safety Performance Assurance has some direct responsibility: the elite force initiative and the security technology initiative. These security initiatives are not mere paper projects. We have been working on them for over a year now, and we are making substantial progress. More importantly, I see us continuing to emphasize improvements in these two key areas long after initial implementation is reached in 2008. We believe it would be of value to the members of the subcommittee to understand what these initiatives are, where we stand on them, and how they will affect security at ESE facilities.

The Elite Force

Let me first briefly clarify the scope of the elite force as we envision it. We recognize that to ensure success under current threat conditions certain segments of our protective forces must be able to employ coordinated and intense defensive and offensive tactical maneuvers with a high degree of skill and precision. The elite force will not be "modeled" after our military special forces as implied in the GAO draft report, because the elite force mission will be significantly different from that of military special operations units. However, the tactical skill levels required of our elite force are intended to be comparable to the skill levels of elite military units. We do not envision that all of our protective forces will require these elite skills. These advanced tactical skills and capabilities will be employed only to protect our most critical national security

assets, such as significant quantities of Special Nuclear Material. Sites that do not possess these vital assets – such as some ESE sites not included in the GAO review – will not be required to field an elite force. Requirements for protective forces at such sites will not change drastically, although addressing the current Design Basis Threat policy will certainly involve some improvements in skills, training, and equipment. Sites, under both NNSA and ESE, which possess critical assets, will be required to maintain an elite force whose primary responsibility is the protection of those assets. However, a site's entire protective force may not need to possess the elite-level capability – only that portion of the force directly responsible for protecting the critical assets. The elite force concept involves changing mission, organizational structure, and tactical methods of engagement as much as it involves increasing tactical skills. Many of our highly trained Special Response Team members already possess many of the skills that will be required of the elite force. Some of our elite force goals may be achieved through the redirection of existing resources. Therefore, the cost of implementing our elite force concept, while substantial, is not as extensive as one might imagine. The elite force will not be at all sites or engage all protective force members, and many of those protective force members who will be included already possess advanced tactical skills.

Let me summarize some of the significant steps we have taken so far in our efforts to define and implement the elite force concept:

- A Protective Force Working Group, with representation from my organization, NNSA, and ESE, spent many months defining and refining the elite force concept, analyzing alternative models, and selecting a preferred option for an elite protective force structure. The group also

identified changes in policy, training, and equipment that will be necessary to create the elite force. The group prepared a report of their activities and recommendations which was reviewed and approved by Ambassador Brooks and me and delivered to the Deputy Secretary on October 25, 2004.

- The Site Assistance Visit effort, conducted between November 2004 and April 2005, yielded important information regarding effective protection strategies and tactical options that will influence ongoing development and implementation of the elite force concept.
- In early January 2005 the Deputy Secretary directed implementation of actions to create the elite force. In late January, we assigned responsibility for continuation of the elite force implementation effort to the Office of Security and directed them to develop an implementation plan.
- In mid-May, we initiated that portion of the elite force implementation plan which could be implemented within SSA, namely: reviewing and drafting changes to DOE directives; developing enhanced training programs; and conducting follow-up inspections and validation activities.
- We have formally tasked the Office of Security and the Office of Independent Oversight and Performance Assurance with various responsibilities for implementing the elite force plan. The Office of Security created the Force Management Advisory Team to oversee further development of the elite force, with participation from NNSA, ESE, and the Office of Independent Oversight and Performance Assurance.

- Policy changes to support elite force objectives are being developed in parallel with the publication of streamlined policy documents.
- The DOE National Training Center, in Albuquerque, NM, is a key component to the improvement of the security and safety posture of the DOE and is developing new courses to support tactical leadership training, enhanced performance testing, and team tactical exercise programs. In November 2004, we designated the National Training Center as the Center of Excellence for Safety and Security Professional Development for the Department of Energy to serve as the Department's principle career development and training center.
- Draft language prohibiting protective force work stoppages has been developed and submitted with a recommendation that it be included in a revision to 48 CFR 952.204-2, the DEAR contract "Security Clause," that is being prepared for rulemaking.
- Subject matter experts at the Pantex plant are preparing to evaluate the proposed Physical Fitness Qualification Courses, which will be conducted under the auspices of the Texas Tech Institutional Review Board. The objective is to establish and validate the appropriate medical and physical fitness standards that would be used to determine a person's capability to complete the courses successfully. All events on the courses are tied to tasks required of protective force personnel, both routine and in response to security incidents. No special task accommodations will be required to support the elite force concept; however, qualification standards may be raised for elite force personnel, such as reduced qualification times for course completion.

- A task team met at Oak Ridge (Y-12), June 14-16, to initiate the development of elite force tactical doctrine and position classification, training, and response expectations within the parameters established by current regulatory directives.
- In mid-July we conducted a workshop at the DOE National Training Center. Participants included members of the Force Management Advisory Team, the Firearms Working Group, the Special Response Team Working Group, and members of the DOE protective force safety community. The agenda addressed: force structure; job analyses; elite force individual and team standards; deadly force rules of engagement; tactical doctrine and training methodologies; tactical deployment and response; weaponry, including firearms training, qualification, and employment; individual and team equipment; reconciliation of safety with realistic training requirements; technological augmentation of the force; review and development of policy revisions; and review of the regulations for possible revisions.
- Some sites, such as Savannah River, Hanford, and Y-12, have begun implementation of actions necessary to transition to an elite force by reorganizing their forces, revising response plans, and reviewing their training programs.
- A number of draft policy revisions to the streamlined *Safeguards and Security Program Planning and Management*, *Physical Security*, and *Protective Force* manuals have been completed and were discussed at the July NTC Workshop. The goal for publication of Departmental policy revisions affecting an elite force is December 31, 2005. We believe that we can implement the necessary elite force requirements within the scope of the current regulations.

Although we may need to amend some regulations in the future, implementation of the elite force will initially be accomplished through the Departmental directives process. For example, protective force arming, arrest, and use of force policies as promulgated by Title 10 Code of Federal Regulations Parts 1047 and 1049 were analyzed and identified issues were discussed with the DOE Office of General Counsel. Based on these discussions, we believe rule changes are unnecessary and that the identified issues can be addressed through policy and effective implementation of those policies.

As indicated by the above list of activities, there are many interrelated facets to implementing the elite force concept, and we are making progress in all areas. We expect to have a substantially upgraded protective force trained to higher standards, emphasizing tactical skills, in place by the end of FY 2008.

Security Technologies

Now let me update you regarding our position on security technologies and what we are doing to make better use of such technologies. We strongly believe that the expanded use of security technologies will allow us to increase the effectiveness and efficiency of our protection systems. Many technologies can serve as force multipliers to assist protective forces in accomplishing their missions more effectively and with less personal risk. The appropriate application of security technologies can enable fewer protective force personnel to meet the protection mission with reduced exposure to direct adversary actions, resulting in more effective protection systems and, in the long run, more cost-effective systems as well. The use of the term “new security

technologies” encompasses a wide range of devices from the highly sophisticated to the fairly simple and basic. Not only do these technologies include sensors and other electronic devices, but also various types of physical barriers, construction enhancements, protective force weapons, armored vehicles, and other types of equipment. These technologies also run the gamut in terms of costs and lead-times required to procure, install, and operate them. While the Department has always been active in identifying, and in some cases developing security technologies, we are now pursuing those efforts with greater intensity; and much of our activity involves ESE sites.

Last year we established the Center of Excellence for Technology Deployment at Pacific Northwest National Laboratory in Richland, Washington. The Center’s mission is to seek out and evaluate new and recently developed security-related technologies and to facilitate the rapid deployment of appropriate technologies to serve as force multipliers or to otherwise improve the effectiveness and efficiency of our protection systems. The center has developed Memorandums of Agreement with two ESE sites – Idaho National Laboratory and Oak Ridge National Laboratory – to deploy a variety of new technologies prior to FY 2008 and beyond.

From November of last year through April of this year we conducted a series of collaborative Design Basis Threat Site Assistance Visits at DOE sites (including three ESE sites) expected to possess significant quantities of Special Nuclear Material on an enduring basis. The purpose of the visits was to work with local DOE and site personnel to identify alternate protection system designs, security technology applications, and protective force tactics that represent opportunities to contain protection system costs while providing an effective defense against the threat described in the October 2004 Design Basis Threat policy. Using a consistent approach and

methodology at each site visited, the collaborative teams consisting of security, technology, and tactics experts from my organization, NNSA, and ESE identified technologies and other innovations that could be employed to effectively and efficiently meet the Design Basis Threat policy. Following these visits, security experts at each site conducted formal vulnerability assessments to determine the specific technologies and other improvements they would employ in their upgraded protection system designs. A similar visit to the fourth and final ESE site possessing significant quantities of Special Nuclear Material is scheduled to take place in September.

Let me describe a few examples of the new technologies that, with ESE's cooperation and participation, we are already introducing to ESE sites to help them improve their protection postures. Unmanned Aerial Vehicles (UAVs) are being tested for future deployment at a large ESE site to help conduct surveillance of the vast areas inside the site's perimeter. The UAVs will be cued by fixed ground-based sensors that can detect an adversary at ranges sufficient to deny the ability to clandestinely stage attackers and equipment to enable an attack at a time that is advantageous to the adversary. The main objective is to use the information provided by the UAVs to enable the protective force to intercept and/or engage the adversary as far away as possible from the site's potential target areas. The UAVs will also be used to improve combat situational awareness by communicating information such as the adversary's strength and location to protective force responders should the site come under attack. As indicated above, we currently envision that the UAVs will be used in conjunction with other early warning sensors, such as unattended ground sensors, to provide a blanket of intrusion detection coverage in areas that cannot normally be observed by site personnel. One such system, developed by the

Department of Defense, uses a thermal camera to scan large areas at distances of several kilometers. The system, known as the Stabilized Panoramic Intrusion Detection and Recognition system, or SPIDER system, provides an alarm when a human enters the area that it is programmed to scan. This technology was shown to provide considerable benefit at an ESE site during a Site Assistance Visit by helping the responding forces to engage the adversary more quickly.

One of the threats seen almost every day in the news is the large vehicle bomb. Our Site Assistance Visits have shown that in some cases a vehicle bomb would have a potentially devastating effect on site security and expedite the adversary's ability to enter a target facility and recover Special Nuclear Material. We have worked with ESE sites to help them develop an overall protection strategy for explosive threats, including vehicle bombs. We have also facilitated the installation of a new type of affordable vehicle barrier at several NNSA sites, which significantly enhances their ability to mitigate this threat at a much lower cost per linear foot than previous designs. What makes this barrier unique is its ease of installation and its ability to effectively stop very large vehicles moving at highway speeds. This barrier and the lessons learned at the NNSA sites have been recommended for use at ESE sites where vehicle bombs are considered attractive methods for attackers.

We have deployed the Advanced Concept Armored Vehicle (ACAV) with installed remotely operated weapons systems (ROWS) at two NNSA sites. We are also in the final stages of deploying multiple ROWS on the interior of an NNSA facility. This deployment application has served to integrate and demonstrate all of the security, safety, training, and administrative factors

needed for deployment. Lessons learned should help the expedited deployment of ROWS at other Departmental sites. These weapons present a formidable obstacle to the adversary, particularly when deployed with other activated systems. Not only do we expect them to improve our ability to neutralize adversaries, but they will also improve the survivability of our protective forces. Our future plans call for assisted targeting technologies to be integrated into these weapons. We anticipate this will eventually lead to manpower savings by allowing an operator to control more than one weapon. Several ESE sites are planning to deploy these weapons in both interior and exterior applications.

We are also investing in new non-lethal technologies which can reliably overwhelm an adversary who has made more progress toward a target than is desired. One example involves the use of directed energy technology previously developed by the Department of Defense for non-lethal applications. The technology uses millimeter wave energy to create an intolerable level of heat on a person's skin, effectively forcing the adversary to move to a different location to escape the weapon's beam. Our current focus is on a smaller and less expensive short-range version of the Department of Defense long-range system. We expect to make this technology available to ESE sites in 2008.

We are also investigating the use of certain commercial grade fire suppression systems as an innovative method of denying adversaries access to Special Nuclear Material. One such system can deploy an offensive gaseous substance very quickly, creating a very hostile environment for adversary operations. At least one ESE site is seriously considering deploying this technology based on the results of their Site Assistance Visit.

We are working with two ESE sites to deploy a system we have been investing in that is capable of tracking the location of protective force responders both inside and outside of buildings, and displaying this information to response force commanders. It also provides a duress capability and vital sign information about each individual responder. Understanding where our responding forces are located during a battle, and their state-of-health, can significantly improve the tactical effectiveness of our response force commanders and positively influence the outcome of a conflict.

These few examples of security technologies represent small individual capabilities that, when used collectively and integrated into protection systems, can have a synergistic effect that improves overall system effectiveness without significant increases in manpower. We are also evaluating and introducing various other technologies, including advanced armored response vehicles, anti-armor weaponry, and many others. We are confident that, with adequate resources, we can procure and integrate appropriate new security technologies into our protection systems within the timeframe established by the Secretary.

I also want to mention one other very important point that was only discussed briefly in the GAO report. GAO noted that a number of protective force members believed that safety constraints placed on their actions during force-on-force exercises greatly reduced the realism of the training provided. In concluding this short discussion of the initiatives to implement an elite protective force and to inject new technologies into our security planning, I must point out that safety constraints are encountered in almost every aspect of this effort, not just force-on-force

performance testing. This is not because safety and security are naturally at odds. Rather, we have to do a better job of coordinating safety and security analyses, assessments, and requirements to ensure we are satisfying both disciplines to the benefit of our protective force. SSA, NNSA, and ESE have recognized this need and have been discussing for some time a mechanism to achieve this important goal. While there is not yet a fully agreed-upon mechanism, the Department at the highest levels of management is working diligently to resolve this safety and security integration issue and has established a security/safety interface working group.

Concluding Remarks

Mr. Chairman and Members of the subcommittee, in summation let me reiterate that we concur with the general results, conclusions, and recommendations of the GAO draft report, which indicate that ESE protective forces are sufficiently trained and equipped to protect their sites, based on current expectations, but demonstrate some training and equipment weaknesses that must be addressed in order to meet the requirements of the October 2004 Design Basis Threat policy. Our own evaluations and observations support this conclusion. While a significant effort remains, we are confident that we can transition the appropriate protective force elements to elite force status over the next two years and be better prepared to counter the threat. I would also like to emphasize the seriousness with which the Department's senior managers, as well as other Departmental elements, are treating our efforts to implement necessary upgrades to our protection systems within established time frames. Although technology development, evaluation, and implementation is a continuous process that will occur as long as we have

protection systems, we are confident that we can integrate appropriate available technologies into our security posture over the next two years.

Accomplishing all this along with our other concurrent security initiatives is an ambitious undertaking. We have a lot of work to do; we can't afford to waste time and we can't afford to approach the challenges tentatively or half-heartedly. We will need the continued support of the Department's senior managers – which I firmly believe we have and will continue to have – and line managers, as well as support from Congress. We have the strong and committed support of Secretary Bodman and Deputy Secretary Sell. The Administrator, NNSA, has provided strong leadership over the recent years and is strongly supportive today. We look forward to the same support and leadership from the recently confirmed Under Secretary. ESE line managers at all levels must step up to the plate and demonstrate the full support necessary for protection system upgrade efforts to ensure that their sites are capable of protecting against the Design Basis Threat under the conditions established by the Secretary.

Thank you.